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Capital Structure, Corporate Governance, and Firm Performance in Pakistan

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Abstract
During the last two decades regulators and policy makers all over the world have emphasized on developing strong and effective corporate governance policies. It is agreed by the experts that a good corporate governance mechanism is the one which facilitates the access of additional capital for corporations, boosts competitiveness, develop financial markets and encourage economic activity. The objective of present study is to measure the effects of selected variables such as firm profitability, firm value, size and leverage on the performance of 69 non-financial sampling companies listed at Pakistan Stock Exchange. From our panel data FEM and REM analysis, it can be easily concluded that major characteristics of corporate governance are determined by firm's profitability and its size. However, firm's leverage and size have less effect on major attributes of corporate governance.

1. Introduction

Coase in his paper in (1937) explained the traits of firm while talking about the idea of transaction cost he explored the reasons of existence of firms in the business market. It also incorporated the transaction cost that is incurred when a firm is used Coase specifically mentioned incremental overhead expenses. He explained the way an overhead manager makes mistakes to consume more than the needed costs by miss allocating the available resources. In order to lessen this inappropriate increase in the expenses corporate governance has vital importance. Therefore to minimize this agency cost a procedure of mechanism is needed otherwise the overall return or profit for entrepreneur will keep on declining gradually. Here comes a point, when attention becomes diverted towards influential work of Modigliani and Miller (1958) and (1963), in which they tested the basic relationship of capital structure decision with the firm value. Modigliani and Miller investigated this relationship under several situations and different assumptions. Many other studies also have been conducted on this notion, which can be concluded as following:

Case 1: it was confirmed by Modigliani and Miller in (1958) that firm value has no significant relation with capital mix. [See,diagram1(a)]

Case: *2* In 1963, It was suggested by Modigliani and Miller that interest expense provides tax shield benefits and for the same reason they recommended to use the highest level of debt because they claimed that higher the debt higher is the value of the firm. [See,diagram1(b)]

Case 3: In the diagram there is a point L this point is indicating optimal volume of debt after which if the debt is further increased it will benefit the firm but this benefit will not be more than the cost of the financial distress [Seediagram1(c)]

Case 4: For this reason this monotonic relation will be further changed when taking into account the effect of financial distress as well as agency cost.[See diagram 1(d)]

Case 5: The final regime of this research incorporates the preferences of management at the time of selection of financial alternatives (Myers 1984) (Figure 1e). In this case there is no level of debt which a manager can choose with full confidence and objectivity actually, this happens as a result of a number of issues that the managers have to tackle with. The choice of debt level has been given great importance because of information asymmetry for the same reason the level of debt is finalized by the line which is tangent in between manager indifference curve and function of firm value. [See diagram 1(e)].

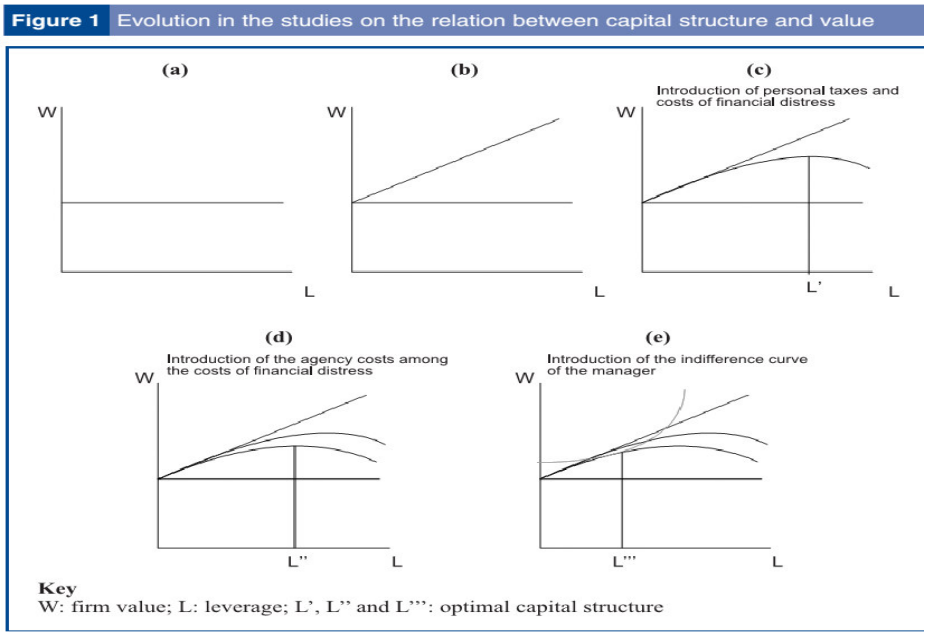


Figure 1: Adopted from (La Rocca, 2007)

Corporate governance is the control mechanism through which owners ensure that board of directors and management are working for the owner's wealth maximization (Jensen & Meckling, 1976). Researchers used the word of "ownership structure" a component that shows governance type. Ownership structure includes largest percent of shares held by a single stockholder, five stockholders, and sometime ten stockholders. Proportion of shares owned by individual owners, and institutional owners are used to represent ownership type. Ownership proportion for domestic and foreign investors is also used seldom to denote ownership type. Similarly percentage possessed by government and private bodies is also considered. Except ownership structure and Type, other measures of the corporate governance include: CEO Duality, Audit Committee Independence, Board Independence, Board Procedures, Disclosures, Board Size, Related Party Transactions, Minority Shareholders Rights, Managerial Ownership and many other. Quality corporate governance surely has an effect on the firm performance (both profitability and share price) Nguyen (2008), Azeem *et al* (2015); and Bhagat & Bolton (2008).

Corporate governance can be defined in various ways, however we are able to classify it into two major categories. One set of constructs sheds light on observed trends of practical issues and evaluation of performance e.g. Debt Equity Mix, efficiency, performance, and relationship to stockholders and stakeholders. Talking about second category it contains some normative constructs and they are about the rules and regulations and standards issued by practitioners, capital markets, judiciary and labour markets.

The first category of definitions is of greater importance for those researchers who talk about and address the issues regarding a single firm. The core interests in this category are functions of board, linkage of financial performance of the firm with management compensation, relationship between labour related factors and performance and shareholding pattern. The researchers who like to make comparisons between firms and countries are interested in normative category. Such kind of studies target difference between normative work plans, actual practices and the effects on trends in performance of firms, investors and other stakeholders. In researches of this kind framework of corporate governance is defined in very broad sense. On the other hand for small scope studies the definition is limited to the stock exchange listing requirements, major rules for protecting the shareholders with less proportion of ownership, rules of trading, practices of accounting and fraud avoiding mechanisms.

A definition which was suggested by Vishny and Shleife (1997, p. 737) "Corporate governance is a mechanism which safeguards the return of the shareholders and other parties who have invested in the company" Another likely way to define the construct of corporate governance is to set the legislation of corporation as a group of components through which the company completes its operations and then administration is separated from administration. This is just in accordance with the definition given by Sir Adrian Cadbury who was the leader of committee on financial aspects United Kingdom for corporate governance: "Corporate governance is the system by which companies are controlled and directed" (Cadbury Committee, 1992).

1.3 History of Corporate Governess

As far as Pakistan is concern the history of corporate governance is not that old for the country. As part of the regulations for stock exchanges the regulatory body of the country Securities and Exchange Commission of Pakistan issued the very first codes of corporate governance in March of 2002. In order to stand active with global

environment and competitiveness Securities and Exchange Commission of the country again issued updated and more effective codes of governance in early 2012. These codes were applicable to the listed companies. SECP adopted an effective procedure for the revision of the codes in that process meetings were arranged with directors and stakeholders in order to get insights about the rules and provisions of the codes. The overall responsibility of management is on board of directors they decide the scope of activities in the company and at the same time they have to make sure the integrity of financial reporting and accounting systems. The directors are also responsible for communications and disclosures of important matters in the annual report.

The image of Companies listed in Pakistan is a vital element on national as well as global level and this position or image depends largely on what are the codes of corporate governance that the companies follow and to what extent they are actually followed by the companies. The SECP has to review and append the codes of corporate governance regularly.

1.4 Corporate Governance in Pakistan

During the last two decades regulators and policy makers in the whole world have emphasized on developing proper and to the mark corporate governance policies. It is agreed by the experts that a good corporate governance mechanism is the one which facilitates the access of additional capital for corporations, boosts competitiveness, develop financial markets and encourage economic activity. Most importantly the companies which have a good governance procedure are in achieve their economic and environmental goals also such companies can easily become socially responsible.

There are three main characteristic of a good governance system namely accountability, fairness and responsibility. These four principles of corporate governance are globally accepted as a base of a good governance mechanism however they vary country to country in a slight manner according to the law and order of every country. These difference in the four fundamental principles change nation wise in order to keep the stake holders satisfied in terms of fulfilment of their best interests. In some countries the rules of corporate governance are strict and the rules and provisions are defined by the regulatory authorities in that case all the companies operating in that particular state has comply with all the provisions of the codes.

It is an accepted that principles of corporate governance are evolving constantly. The past experience tells that the previously existed codes of corporate governance could not function perfectly because history has seen the bankruptcy of World Com. Xerox, Tyco and lot more companies this happened due to weakness of the codes. These business failures signify that the the entities face bankruptcy because their internal checking procedures were not properly designed to be fully secure.

1.5 Main Research Question

The present study is intended to answer the following research questions. Does firm's size, Leverage, profitability and value has any impacts on the attributes of corporate governance. E.g. institutional ownership, managerial ownership, audit committee independence, audit committee size, board independence and finally board size.

1.6 Objective of Study

The objective of present study is to measure the effects of designated company specific elements (firm profitability, firm value, size and leverage) on selected governance attributes in the non-financial listed companies of Pakistan

2. Literature Review

Corporate governance is one of the most common research topic in finance now a days in relation to its impact on firm value and firm performance. Each community whether developed or developing community is contributing for Corporate Governance research. Pakistan's contribution to Corporate Governance research is a bit critical from its practical contribution. This study reviewed the literature on the subject matter in two categories: first is the developed country and second is on developing countries while having a special focus on the studies from Pakistan.

Corporate governance is heavily studied in business research by its attributes, practiced and firm decisions. Corporate governance research was mainly led by bankruptcies of firms in early 2000s (Clarke and Dean, 2007). Since then, rules and regulations have been made strict to avoid such calamities especially for public firms (Demirag and Solomon, 2003). Mostly the corporate governance literature is studied in aspects of business financing, firm performance, executive compensation, organizational structure and firm value (Gompers et al., 2003; Lemmon and Lins, 2003 Brown and Caylor, 2009; Giroud and Mueller, 2010; Larcker et al., 2011).

2.1. Evidence from Developed Countries

2.1.1. Capital Structure and Firm Value

Capital structure can influence the firm value by many ways like reducing shareholders and debt holders' conflicts of interest along with financial distress cost and bankruptcy cost (Jensen and Meckling, 1976, Williamson, 1988); different compositions of management compensations (Jensen and Meckling, 1976); and enabling check-ups on

management decisions by shareholders and financial parties (Shleifer and Vishny, 1986).

2.1.2. Corporate Governance and Firm value

Many international journals ensure the quality of financial research including Financial Economics, Journal of Corporate Finance, (indexed in Elsevier); Corporate Governance (indexed in Emerald); and Corporate Governance: An International Review (indexed in Wiley online library). Researches published in these databases are mainly from Corporate Governance, but not confined to journals named. Researches from Bauer et al. (2008) and Bhagat & Bolton (2008) show the impact of corporate governance on firm's share price and its performance. These researches mostly described the profiles of sample firms, correlation and regression analysis for the relationships. According to Bauer et al. (2008), Japanese firms with low corporate governance controls are outperformed by firms having higher corporate governance practices. They used Board Accountability, Financial Disclosure, Internal Controls, Shareholder Rights and CEO Remuneration for the study. Moreover the result of 315 firms from Japan showed that the higher corporate governance firms perform better than the lower corporate governance firms by 15% a year. However they also found that not all indices affect the corporate performance.

2.1.3. Relationship of Corporate Governance, Firm Value and its Capital Structure and important role of corporate Governance.

A firm's capital structure can be examined by the rights and features that illustrate its assets' effect with altered levels of strength and governance activities. Williamson 1988 denotes that both debt and equity are financing and corporate governance instruments. Debt can be used as corporate governance tool to strict the management yet the equity allows more flexibility and decision making power. Therefore since everything included in capital structure is also corporate governance instrument, everything in corporate governance must be taken into account as debt-equity mixture and their impacts. For example investors are curious about the functions of capital structure and how the contracts are done to ensure better corporate administration and deploy check forces for administration control (Zingales, 2000)..

2.2. Evidence from Pakistan

2.2.1. Capital Structure and Firm Value

Pakistan had few studies related to capital structure and firm value however, much of the work is focused upon investigating capital structure and profitability measures (Gull et al, 2013),

And many studies have shown the impact of corporate governance on firm performance and value shown below.

2.2.2. Performance of Firm and Corporate Governance

Firm leverage and growth have positive relation with Tobin's Q confirming major significance for measuring firm performance. Yasser (2011) studied the relationship of Corporate governance and corporate performance in Pakistan's communication sector with the help of Shareholder Rights (defined and protected) ,Equity Structure, Board Composition, Transparency & Disclosure, ROA, Net profit margin, Sales Growth, Tobin's Q, Dividend yield for 10 listed firms from communication sector of Pakistan. The analysis showed that firms with better governance mechanisms tend to be more profitable, dividend giving and more sustainable firms. Hassan, Butt (2009) studied the relationship of corporate governance and capital structure in Pakistan. Using 59 non-financial Karachi Stock Exchange listed firms and incorporating Ownership structure, Board size, Non-executive directors, CEO/Chair duality, Firm size, Profitability with help of regression and correlation analysis.

2.2.3. Importance of Capital Structure and Corporate Governance with Firm Value

To our knowledge, no research addresses the role of corporate governance in the relationship between capital structure and firm value. Some studies tested the effect of corporate governance on firm performance as discussed above, some also targeted impact of corporate governance on capital structure Shah (2009), but no study tested the mediating or/and moderation effect of corporate governance in the relationship of capital structure and firm value.

2.2.4 Impact of Board Size and Board Independence on Firm Value and Leverage

The writing on board structure is not yet broad, and the main part of the confirmation depends on US information e.g, Linck et al. (2008) is the most thorough concentrate in this way, as it looks at 6931 firms utilizing information from 1990 to 2004. The reason that organizations pick board structures in view of the apparent expenses and advantages of the checking and educating parts with respect to sheets, which have a tendency to shift fundamentally crosswise over extensive and little firms. Specifically, firms with high development opportunities, high R&D uses, and high stock return instability tend to have littler and less free sheets, while bigger firms tend to have bigger and more autonomous sheets (Linck et al., 2008).

Boone et al. (2007) report, on the premise of their study, that board size and the extent of free executives are absolutely identified with the extent of operation (as measured by firm size, age, and the association's quantity business sections); and that board size is decidedly identified with private advantages (i.e. industry focus and vicinity of takeover resistances) yet contrarily identified with checking expenses (i.e. business sector to-book proportion, R&D consumption, return fluctuation, and CEO proprietorship), accordingly supporting the exchange off contention between the firm-particular advantages of expanded observing and its expenses (Boone et al., 2007; Harris & Ravi, 2008).

3. Theoretical Framework

It is very important part of a research study because it explain the total framework and structure which is supported by the theory. Normally we based our research on some models and theories.

We have twelve building blocks of finance and corporate governance is one of the them. Another major finance block is capital structure and third one is profitability which is the base of any organization. Therefore our study is very important because it touches the three major theories. *Most of the people know about the theory who belongs to different discipline of life and they know the meaning of the theory in the same context. Theories are the statements which are formulated in order to predict or create understanding of a particular phenomenon.*

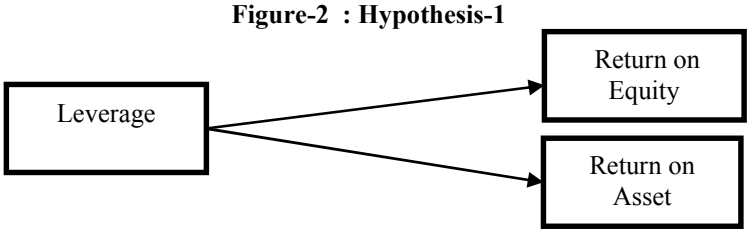
But in many cases it also happen that people do research in order to challenge different theories or their existing knowledge. But the knowledge of different finance theories is very important for a research. There are twelve building blocks of finance. These 12 pillars provide the base for different research work in finance. In this studies we have used three major finance theories i-e

- *Corporate Governance theory*
- *Capital structure theory*
- *Profitability theory*

Based on the literature review and theoretical framework, following hypothesis are developed:

H1: Impact of Capital Structure on Firm Performance (Path A)

Figure-2 : Hypothesis-1



H2: Board Size has significant impact on profitability, firm value, leverage, and firm size.

H3: Board Independence has significant impact on profitability, firm value, leverage, and firm size.

Figure-3: Hypothesis-2

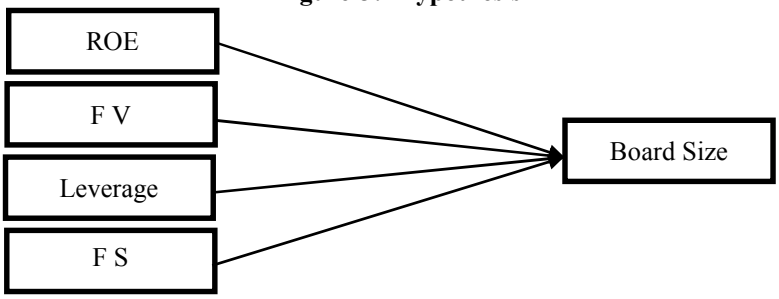
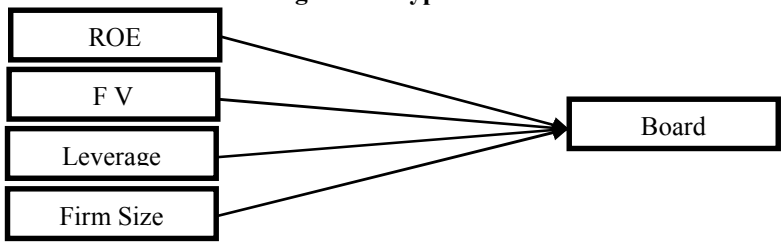


Figure 4: Hypothesis-3



3.1. Impact of Managerial Ownership and Institutional Ownership on Firm Value and Leverage

The relationship between proprietorship structure and firm worth remains an important issue to fund a company. Demsetz (1983) contended that organizations experience quick and uncommon changes in their proprietorship structure in light of their gainfulness. In this appreciation, firm execution could be a determinant of possession structure for reasons identified with insider data or to execution based remuneration. Demsetz and Villalonga (2001) pointed out that possession structure is picked in order to expand firm execution, while Himmelberg et al. (1999) upheld the thought that proprietorship structure may be endogenously dictated by the company's contracting surroundings. As such, when we represent the interrelationships under the system of endogeneity (Demsetz and Villalonga, 2001), a typical conclusion is that administrative possession, does not foresee execution.

Loderer and Martin (1997) connected concurrent mathematical statements estimation strategy by setting administrative proprietorship and firm execution, as endogenous variables in a two comparison framework. Utilizing a vast example of 867 organizations, which take part in purchase outs, they presumed that administrative

proprietorship does not influence the company's execution. Cho (1998) analyzed the relationship between possession structure, venture, and the organization's quality as for the potential part of the proprietorship structure as a deciding variable on speculation. In a specimen of 326 firms from Fortune 500, the creator discovered diverse results relying upon the econometric technique utilized.

Figure 5: Hypothesis 4

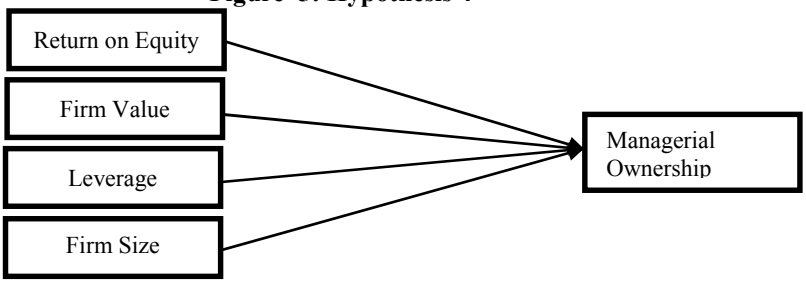


Figure- 6: Hypothesis 5

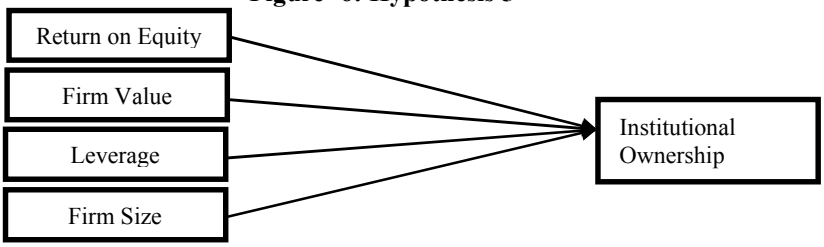
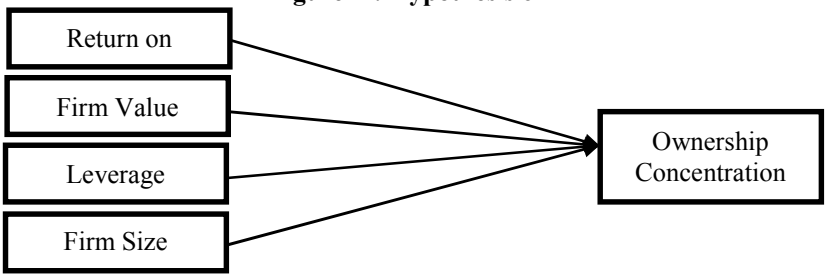


Figure- 7: Hypothesis 6



Himmelberg et al. (1999) contended that both administrative proprietorship and firm execution are endogenously dictated by exogenous changes or different elements inside of the company's range. Utilizing an unequal (after some time) 12-year test, they amplified the cross' consequences sectional investigation by Demsetz and Lehn (1985) and found that administrative possession could be clarified by an arrangement of particular variables connected to the firm environment in a manner that fulfils the organization's expectations hypothesis. Utilizing board information and controlling for altered firm impacts, they discovered no measurably noteworthy relationship between's administrative proprietorship and corporate execution. Conversely, when instrumental variables are utilized alongside analysing for endogeneity of possession, they observed that a quadratic detail portrays the impact of proprietorship on firm execution. Himmelberg et al. (1999) presumed that past works were not able to inspect the non-recognizable heterogeneity of the business (which influences both proprietorship status and execution), and consequently any relationship identified may come about because of spurious connections.

Demsetz and Villalonga (2001) analysed the issue of proprietorship structure and corporate execution from an alternate point of view contending that no past study had treated possession structure effectively.

4. Research Methodology

Research methodology includes all the research design like data collection ways, sampling, models or equations and estimation methods.

4.1 Sampling

In our empirical research we select the sample from non-financial sector of the companies listed in Karachi stock exchange. The reason behind this is that Government rules and legal requirements are different for financial and non-financial sector. Scope of the study is only revolves around non-financial sector as mention in the table below.

4.2 Sample for study

We have created our sample of 69 non-financial companies listed at Pakistan Stock Exchange.

Table-4.1: Population for Study

From the total companies of non-financial sector, we select the data on the bases of weights assign to each sector according to total listed number of companies of each sector.

Total companies in Index	100
Less: Financial companies	*25*
Non-Financial companies in Index	75
Less: Companies with missing data	*06*
Sample non-financial companies	69

In order to select the good representation from Karachi Stock Exchange (KSE-100 index) we eliminate the names of the financial sector like banks and other financial services institutions. Our sample period is ten years which starts from 2003 to 2012. We did not find the data of all the companies because of the non-availability of annual reports. This is the reason that our sample left for only 69 companies.

4.2 Data

Once the sample period and sample companies were selected, the next steps was the collection of the data for the analysis of our research models. For that matter we search different websites, like State Bank of Pakistan, Security Exchange commission of Islamabad, Balance Sheet analysis etc. for 10 years of 69 companies we need to collect the 690 observation for those variables which were required in our research. We have already mentioned that our data is balanced panel data.

Although there is chance of biasness because we did not use all those companies whose panel data was not balance

4.3 Research Equations of Models

The research equations of our study which were supposed to be measured are as follows:

$$ROA_{it} = \beta_0 + \beta_1 (LEV_{it}) + \epsilon_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 (LEV_{it}) + \epsilon_{it}$$

$$MB_{it} = \beta_0 + \beta_1 (LEV_{it}) + \epsilon_{it}$$

$$CGM_{it} = \beta_0 + \beta_1 (LEV_{it}) + \epsilon_{it}$$

$$ROA_{it} = \beta_0 + \beta_1 (LEV_{it}) + \beta_2 (CGM_{it}) + \epsilon_{it} \text{ .....again divided in to six models}$$

$$ROE_{it} = \beta_0 + \beta_1 (LEV_{it}) + \beta_2 (CGM_{it}) + \epsilon_{it} \text{ .....again divided in to six models}$$

$$MB_{it} = \beta_0 + \beta_1 (LEV_{it}) + \beta_2 (CGM_{it}) + \epsilon_{it} \text{ .....again divided in to six models}$$

Here ROA denotes return on assets, ROE denotes return on equity, MB means market to book ratio and CGM denotes selected corporate governance measures (Institutional ownership, managerial ownership, ownership concentration, Board size, board independence and CEO duality. When we practically work on E-view last 4 equations require corporate governance index. And if we run it with index it violate certain properties of regressions. So it was decided to run all the Six variables independently and see its effect of profitability, leverage and firm value.

$$BS = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}1$$

$$BI = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}2$$

$$ACS = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}3$$

$$ACI = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}4$$

$$MO = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}5$$

$$IO = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}6$$

4.4 Description of the Variables Followings are the different variables and their details used in the study.

Table-4.2 Variables of Study

Variable	*Proxy*	*Symbol*	*Measurement*
Board Composition	Board Size	BS	Total number of directors on the board
Board Composition	Board Independence Ratio	BI	Ratio of number of outside directors to total number of directors
Audit Committee Composition	Audit Committee Size	ACS	Total number of directors in audit committee
Audit Committee Composition	Audit Committee Independence	ACI	Ratio of number of outside directors in audit committee to total number of directors
Ownership Structure	Managerial Ownership	MO	Ratio of shares held by CEOs, directors, and their immediate family members to total outstanding shares
Ownership Structure	Institutional Ownership	IO	ownership stake in a company held by financial organizations, pension funds or government, percent of ownership by other than individuals
Profitability	Return on Assets	ROA	Ratio of net profit to total assets
Firm value	Market to Book Ratio	MB	Ratio of market Value of Equity to book value of equity
Leverage	Debt ratio	DR	Calculated as ratio of total debt to total assets
Firm Size	Log Natural of Total Assets	LNTA	Natural logarithm of total assets

4.5 Estimation Methods

Mr. William Rowan Hamilton is a person who introduced linear equations in 1843. After a detail discussion and diagnostic test we found that Fixed Effects Method support our data in all the cases except in eq-2. We have studied that there are some of the trial in front of a researcher is: which method is better either FEM or REM?

In order to get the answer of this question we need to find out different correlation between individual, cross-section specific, error component, and regressors. When we suppose that εi and the X's are uncorrelated then we should use REM but if εi and the X's correlated then FEM is most suitable method. Now we conclude our discussion in the way that we use two major diagnostic tests which can help us empirically based on the available data set and we can apply these two test in eviews 7. These are

a) Redundant Fixed Effects Test and
b) Hausman test.

When we test the first diagnostic test it has two hypothesis.

Null hypothesis: All the cross-sectional units have common constant" by using F-distribution.

In this case when we test in eview and it is rejected it means that alternative hypothesis is accepted which is opposite of that. So when we are unable to use simple OLS technique then we go for the other diagnostic test

which is Hausman test in order to know that whether we should use fixed effect or random effect method. In this test our Null hypothesis is that "we should use REM and it is more consistent and efficient and alternative is that it is inconsistent and inefficient.

On the basis of this test results which is a vector of dimension k which will be distributed chi-square (k). So if the Hausman test statistic is large, we should use fixed effect method but if it is other way round means statistic is small, then we should use Random effect method.

5. DATA ANALYSIS

We measure the effects of profitability, firm worth, leverage, and firm size on the basis of governance attributes e.g. board size isolated. Before calculating regression, we must select the suitable method concerning panel methods, Infect we use different main attributes of corporate governance like board size etc. and measures their effects on key factors of a firm size, leverage and firm worth. These two tests results decides that which method should we use for estimation. Rest of the section of this paper will describe all the software results and its interpretation details. We perform two tests. Through Redundant fixed effects tests we reject our null hypothesis which means the use of constant equation should not be the common for each group. When we identify this then we determine that ordinary least squares' (OLS) estimators may not give us accurate results. After this decision, we need to decide that whether we should use fixed or random effects for the data so we go for Hausman statistic. By estimating the Hausman test, results shown that there is lack of statistical evidence supporting fixed effects.

Table- 5. 1 Impact of Leverage on Return on Asset (Equation 1)

$ROAit = \beta 0 + \beta 1\ (LEVit) + ?it$ Model-1

Model fit	Adjusted. R^2		F
	0.4493		9.144
Independent Variables	Beta	T	Sig.
Constant	4.642	1.803	0.072
Leverage.	7.061	5.509	0.000

Debt has a positive impact on profitability of the firm as it is shown from adjusted R square.

Table-5.2 Impact of Leverage on Return on Equity (Equation 2)

$ROEit = \beta 0 + \beta 1\ (LEVit) + ?it$ Model-2

Model fit	Adjusted. R^2	F	
0.5493	8.144		
Independent Variables	Beta	T	Sig.
Constant	3.639	1.805	0.042
Leverage.	5.100	3.510	0.000

Debt has a positive significant impact on profitability of the firm as it is shown from adjusted R square.

Table 3. Impact of Leverage on MB (Equation 3)
MBit = β0 + β1 (LEVit) + ϵit Model-3

:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.828	0.685	7.66	0.000
LEV	0.003	0.004	1.309	0.042
R-squared	0.052			
Adjusted R-squared	0.046			
Prob(F-statistic)	0.000			

Same is the results of equation 3 where we observe the relationship of market to book ratio with leverage. It can be easily observed that leverage has positive impact on MB ratio.

5.4 Equation-4

In order to see the impact of corporate governance variables on firm value, profitability and leverage following six equations are run on E-Views after the two diagnostic tests.

Table 5.4 Equations of the Model

Following research equations are to be estimates for the study:

$$BS = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}1$$

$$BI = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}2$$

$$ACS = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}3$$

$$ACI = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}4$$

$$MO = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}5$$

$$IO = \beta_0 + \beta_1 ROE + \beta_2 FV + \beta_3 LEV + \beta_4 FS + \mu \quad \ldots\ldots\ldots\ldots \quad Eq\text{-}6$$

Where ROE is return on equity, FV is firm value, BS is board size, ACS is audit committee size, BI is board independence, ACI is audit committee independence, MO is managerial ownership and IO is institutional ownership. LEV is leverage and FS is firm size. β_0 is intercept and β_1 to β_8 are regression slope coefficients. μ denotes the error term.

Our forth model check the profitability, firm value and leveraged of companies and its board size. We do it through RFE and Hausman test.

5.5 Results and Discussions

5.5.1 Interpretation of Equation 1

Now we discuss the results of our regression analysis with board size (BS) which is one of the key determinants of corporate governance. It is can be easily observed Table-5.6 We come to know through our analysis that on average the BS independent of all factors is almost 6. But on the other hand when we see firm performance with board size it has negative impact not only with ROA but with MB ratio also. This relationship of market to book ration with BS is not statistically seems to be significant as it can be observed from its slope coefficient which is -.001. But on the other hand leverage and firm size has positive affect on board size. It can be concluded from this results that large firms has big board size. On the whole this model is fitted when we see the p-value of F-stat.

Although R^2 is very low but for this we can argue that the model is based on the random effects estimation. Results of equation 1

Table-5.6: Regression Results for Board Size

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.929	0.759	7.810	0.000
ROA	-0.002	0.002	-1.309	0.191
MB	-0.001	0.000	-3.927	0.000
DR	0.054	0.031	1.764	0.078
LNTA	0.163	0.046	3.537	0.000
R-squared	0.054			
Adjusted R-squared	0.049			
Prob(F-statistic)	0.000			

5.5.2 Interpretation of Equation 2

Like previous equations we follow the same pattern that is first we go for diagnostic tests for board independence ratio. After our first diagnostic test which is Hausman test our results shows that we should use fixed effects method.

Our analysis showed that on average the Board independent ration of all factors is almost 65%. But on the other hand when we see firm performance with board independence ratio has very small impact not only with ROA but with MB ratio also. This relationship of market to book ration with BS is not statistically seems to be significant as it can be observed from its slope coefficient.

But on the other hand leverage and firm size has positive affect on board size. It can be concluded from this results that large firms has big board size.

On the whole this model is fitted when we see the p-value of F-stat. Now R^2 is high if we compare it with our previous model where it was very low but for this we can argue that this model is based on the fixed effects estimation and it is different.

Table-5.7: Regression Results for Board Independence

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.650	0.094	6.887	0.000
ROA	0.001	0.000	3.821	0.000
MB	0.000	0.000	3.303	0.001
DR	0.019	0.004	5.251	0.000
LNTA	-0.019	0.006	-3.310	0.001
R-squared	0.543			
Adjusted R-squared	0.490			
Prob(F-statistic)	0.000			

5.5.3 Interpretation of Equation 3

In Redundant Fixed effect test, the P-value is significant so we move towards the Hausman test, and our results shows that we should use random effect method for our analysis Table-5.8 explain the results of audit committee size as dependent variable and all other as independent variables. ROA, MB, DR and LNTA all has positive significant relationships. Overall model can be easily observed from P-Value and F-state. Now R^2 high if we compare it with our previous model where it was very low but for this we can argue that this model is based on the fixed effects estimation and it is different.

Table-5.8: Regression Results for Audit Committee Size

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.054	0.054	0.054	0.054
ROA	0.049	0.049	0.049	0.049
MB	0.000	0.000	0.000	0.000
DR	0.054	0.054	0.054	0.054
LNTA	0.049	0.049	0.049	0.049
R-squared	0.019			
Adjusted R-squared	0.013			
Prob(F-statistic)	0.012			

5.5.4 Interpretation of Equation 4

After our first diagnostic test which is Hausman test our results shows that we should use random effect method for our analysis. We come to know through table 5.9 our analysis that on average the Audit committee independent ratio of all factors is almost 28%. But on the other hand when we see firm performance with Audit committee independent ratio has very small impact not only with ROA but with MB ratio also. This relationship of market to book ration with BS is not statistically seems to be significant as it can be observed from its slope coefficient.

But on the other hand leverage and firm size has positive affect on board size. It can be concluded from this results that large firms has big Audit committee independent ratio. Slop coefficient is .012 which is significant. On the whole this model is fitted when we see the p-value of F-stat. Now R^2 high if we compare it with our previous model where it was very low but for this we can argue that this model is based on the fixed effects estimation and it is different.

Table-5.9: Regression Results for Audit Committee Independence Ratio

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.282	0.090	3.134	0.002
ROA	-0.001	0.000	-2.702	0.007
MB	0.000	0.000	2.343	0.019
DR	0.001	0.004	0.209	0.834
LNTA	0.012	0.005	2.195	0.029
R-squared	0.023			
Adjusted R-squared	0.017			
Prob(F-statistic)	0.003			

5.5.5 Interpretation of Equation-5

First go for diagnostic tests for audit committee independence we observe that there is no significant group-wise heterogeneity. Here now we use pooled OLS for our panel data.

Table-5.10 provides the results of regression analysis for managerial ownership. Analysis shown an average audit committee independence ratio regardless of these factors of 78% approximately. We come to know through table 4.14 our analysis that on average the managerial ownership of all factors is almost 78%. But on the other hand when we see firm performance with Audit committee independent ratio has negative impact not only with ROA but with MB ratio also. This relationship of market to book ration with BS is not statistically seems to be significant as it can be observed from its slope coefficient. But on the other hand leverage and firm size has positive affect on board size. It can be concluded from this results that large firms has low managerial ownership. Slop coefficient is negative. On the whole this model is fitted when we see the p-value of F-stat. Now R^2 high if we compare it with our previous model where it was very low but for this we can argue that this model is based on the fixed effects estimation and it is different.

Table-5.10-Regression results for Managerial Ownership

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	78.365	14.045	5.580	0.000
ROA	0.035	0.037	0.954	0.340
MB	-0.001	0.003	-0.342	0.732
DR	0.590	0.677	0.872	0.384
LNTA	-1.827	0.863	-2.118	0.035
R-squared	0.007			
Adjusted R-squared	0.002			
Prob(F-statistic)	0.285			

5.5.6 Interpretation of Equation 6

To arrive at a particular method, we follow the same pattern. First go for diagnostic tests for institutional ownership to check the appropriate method of panel regression. After our first diagnostic test which is Hausman test our results shows that we should use fixed effect method for our analysis. For this variable, two regressors (profitability and leverage) are not the determinants due to lack of sufficient statistical evidence. Firm value (market to book ratio) has negative impact on the institutional ownership. Only variable having strong relationship is firm size. This relationship is significant and positive in its nature.

Overall model's fit as shown by the F-test and its probability value in Table 5.11. In this case R-squared is high as compared to our previous analysis but this value is not important because of fixed effect's characteristic that it uses dummies to estimate the groups' effects, so we cannot just straightforwardly say that these four determinants explain fifty four percent variations in the board independence variable.

Table-5.11:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.796	12.212	-0.543	0.588
ROA	0.050	0.035	1.451	0.147
MB	-0.016	0.004	-4.423	0.000
DR	1.005	0.628	1.400	0.110
LNTA	2.888	0.993	2.807	0.003
R-squared	0.572			
Adjusted R-squared	0.528			
Prob(F-statistic)	0.000			

6. Conclusion & Recommendation

It can be easily concluded now that major characteristics corporate governance is determined by firm's profitability and its size. However its firm's leverage and size have less effect on major attributes of corporate governance. (Linck et al., 2008) and many other researches evident and supported the significant impact on large and small firms who select board structure created on its costs and benefits of monitoring. Above all he also concluded that all those companies which incur high research and developed expenses and high stock return volatility leads towards small independent boards but large firms have large independent board. It is also observed that all those firms who have maximum high level of managerial ownership are related to less independent board.

There are many other factors which are also determined the Ownership structure. Another perceptive is also evident that the board size and ownership structure both are not only endogenously determined but different firms board structure and ownerships also different due to its cost and benefits. According to this view point, a firms overall structure shows its tradeoffs between its costs and benefits. So it means most suitable system of corporate governance is different from firm to firm

Despite of important measures taken by Government of Pakistan, the mechanisms of corporate governance of Pakistani firms is still weak as compared to firms in developed countries. This trend of weak mechanism is very clear from the study of some hot cases happened in Pakistan like Taj Company, PTCL

privatization, Mehran Bank, Tawakal Group of companies and Crescent Bank, KASB banks, Bank of Punjab scandals. In one or the other way, probably, all parties have great concern in corporate governance for the real output of their firms. The each and every individual, firms even States have their respective interests. However, the nature of interest may differ from each other like the individuals always want to increase their wealth, the administrators want to boost pays and fringe benefits, and similarly the States usually have interest to increase the tax net. Main concerns in business ascendency are Moral predicaments, Window Dressing, Board Composition, and collaboration with small stakeholders. The consequences show that business ascendency characteristics, in part, are described by certain elements in Pakistani non-financial organizations. Furthermore, this revision has placed certain footing by revealing the main question of defining business ascendency procedures and strong regulatory framework for effective implementation of the codes of corporate governance issued by Pakistan Stock Exchanges and Securities and Exchange Commission of Pakistan.

6.1. Future implications for New Researchers

Future studies could be conducted in relations to exploration approaches: using instantaneous calculation technique or two point slightest quadrangles etc. as the homework is created on quantifiable study proposal merely. It can be experienced by engaging the qualitative methods of examination. Possibly to have additional review by engaging greater worn-out statistics. The communal control inconstant can be castoff subsequently piloting a qualitative review to allocate precise masses to every variable. It can support to touch at correct representation of target relations as every governance variable will be valued taking place the foundation of stakeholder's sensitivities.

6.2 Practical implication

Shareholders attempt to understand governance resolutions by observing at company's selections in sponsoring so as to collect data on upcoming projections. Executives can, in turn, encouragement shareholder outlooks and subsequently the price of shares concluded their sponsoring choices. Proprietors can apprehend in which way they have to practice their elective moralities while electing governance mechanism for the establishment. The conclusions that these determining factor can change corporate governance assembly is very dangerous. It can stimulate administrators to influence accounting statistics, as they will be frightened of getting governance transformed due to variation in these aspects. Correspondingly stakeholders may can switch these aspects to sustain anticipated governance assembly.

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